

## CLAIM AMENDMENTS

This **listing of claims** will replace all prior versions, and listings, of claims in the application:

1. **(Currently Amended)** A computer-implemented method of monitoring an element in a computer network, said method comprising:
  - monitoring a preselected variable relating to said element;
  - defining a threshold for the monitored preselected variable, wherein defining the threshold for the monitored preselected variable comprises:
    - defining a first set of threshold eras such that the threshold eras of the first set of threshold eras are periodic at an era frequency and have a common era length;
    - defining a plurality of metric threshold periods that occur within each threshold era of the first set of threshold eras such that the metric threshold periods do not overlap each other and occur within the threshold eras of the first set of threshold eras at predetermined times within the threshold eras, the plurality of metric threshold periods including a first metric threshold period and a second metric threshold period;
    - computing an average value for the preselected variable within the first metric threshold period based on values obtained for the preselected variable within the first metric threshold period during previous threshold eras in the first set of threshold eras;
    - computing an average value for the preselected variable within the second metric threshold period based on values obtained for the preselected variable within the second metric threshold period during previous threshold eras in the first set of threshold eras;
    - determining a first threshold based on the average value for the preselected variable within the first metric threshold period; and
    - determining a second threshold based on the average value for the preselected variable for the second metric threshold period;
    - establishing a sliding window in time that is shorter than the common era length;

determining if the preselected variable is currently breaching the threshold during a threshold era included in the first set of threshold eras, wherein determining if the preselected variable is currently breaching the threshold during a threshold era included in the first set of threshold eras comprises:

determining if the preselected variable is breaching the first threshold during a first metric threshold period of the current era included in the first set of threshold eras; and

determining if the preselected variable is breaching the second threshold during a second metric threshold period of the current threshold era included in the first set of threshold eras;

repeatedly generating a time above threshold value, said time above threshold value being a measure of an amount of time during which the preselected monitored variable exceeded the threshold during the sliding window of time, ~~wherein the measure of the amount of time during which the monitored variable exceeded the threshold during the sliding window in time includes an aggregation of two or more noncontiguous time intervals during which the monitored variable exceeded the threshold during the sliding window in time;~~

detecting when the time above threshold value exceeds a predefined condition window value; and

in response to detecting when the time above threshold value exceeds said condition window value, generating an alarm.

2. **(Original)** The method of claim 1 further comprising after generating an alarm, maintaining the alarm at least as long as the time above threshold value exceeds a clear window value.
3. **(Original)** The method of claim 2 wherein said clear window value is equal to said condition window value.

4. **(Original)** The method of claim 3 further comprising:  
monitoring a plurality of variables relating to said element, said preselected variable being one of said plurality of variables; and  
for each of the plurality of monitored variables, defining a corresponding threshold for that other variable, wherein the time above threshold value is a measure of an amount of time during which any one or more of the monitored variables exceeded its corresponding threshold during the corresponding sliding window of time.
5. **(Currently Amended)** The method of claim 1 wherein determining the step of defining the first threshold for the preselected variable comprises:  
computing an average value for the preselected variable based on values obtained for the preselected variable over a corresponding prior period;  
defining an excursion amount; and  
setting the first threshold equal to a sum of the average value for the preselected variable within the first metric threshold period plus the excursion amount.
6. **(Currently Amended)** The method of claim 1.5 wherein the common era length period of time is less than or equal to a day.
7. **(Currently Amended)** The method of claim 1.6 wherein defining a threshold for the monitored preselected variable further comprises the corresponding period of time is a particular hour period of a day;  
defining a second set of threshold eras such that the threshold eras of the second set of threshold eras are periodic at the era frequency and have the common era length, but are offset in time from threshold eras of the first set of threshold eras such that the eras of the first set of threshold eras and the eras of the second set of threshold eras do not overlap;  
defining a plurality of metric threshold periods that occur within each threshold era of the second set of threshold eras such that the metric threshold periods do not overlap each other and occur within the threshold eras of the second set of threshold eras at predetermined times within the threshold eras, the plurality of metric

threshold periods that occur within each threshold era of the second set of threshold eras including a third metric threshold period and a fourth metric threshold period;

computing an average value for the preselected variable within the third metric threshold period based on values obtained for the preselected variable within the third metric threshold period during previous threshold eras in the second set of threshold eras;

computing an average value for the preselected variable within the fourth metric threshold period based on values obtained for the preselected variable within the fourth metric threshold period during previous threshold eras in the second set of threshold eras;

determining a third threshold based on the average value for the preselected variable within the third metric threshold period; and

determining a fourth threshold based on the average value for the preselected variable for the fourth metric threshold period.

8. **(Currently Amended)** The method of claim 7 ~~6~~ wherein the common era length is a day and the era frequency is once per week such that the first set of threshold eras includes days that fall on a first day of the week, and the second set of threshold eras includes days that fall on a second day of the week ~~step of computing the average comprises computing a mean value for the preselected variable using values obtained for that preselected variable for the same hour period of the same day of the week for a predetermined number of previous weeks.~~

9. **(Currently Amended)** The method of claim 5 wherein the step of defining an excursion amount comprises:

computing a standard deviation for the preselected variable based on values obtained for the preselected variable ~~over a predetermined period of time;~~ and

setting the excursion amount equal to K times the computed standard deviation, wherein K is a positive number.

10. **(Currently Amended)** The method of claim 8 ~~9~~ wherein ~~the step of computing an average value for the preselected variable within the first metric threshold period based on the standard deviation comprises computing the standard~~

~~deviation using values obtained for that preselected variable within the first metric threshold period during previous threshold eras in the first set of threshold eras comprises computing an average value for values of the preselected variable corresponding to for the same hour period of the same day of the week for a predetermined number of previous weeks.~~

11. **(Currently Amended)** The method of claim 1 2 wherein the measure of the amount of time during which the monitored variable exceeded the threshold during the sliding window in time includes an aggregation of two or more noncontiguous time intervals during which the preselected variable exceeded the threshold during the sliding window in time ~~the step of defining the threshold for the preselected variable comprises:~~

~~defining an excursion amount; and~~

~~setting the threshold equal to H less the excursion amount, where H is a positive number.~~

12. **(Currently Amended)** The method of claim 14 wherein the measure of the amount of time during which the monitored variable exceeded the threshold during the sliding window in time includes time during which the preselected variable exceeded the threshold in two or more metric threshold periods ~~step of defining an excursion amount comprises:~~

~~computing a standard deviation for the preselected variable based on values obtained for the preselected variable over a predetermined period of time; and~~

~~setting the excursion amount equal to K times the computed standard deviation, wherein K is a positive number.~~

13. **(Currently Amended)** A computer-implemented method of monitoring an element in a computer network, said method comprising:

presenting a user with a plurality of variables associated with one or more elements in a computer network;

receiving a selection by the user of two or more of the presented variables, the two or more selected variables comprising a first selected variable and a second selected variable;

defining a profile for the selected variables that element, said profile including a plurality of different alarm rules, the plurality of different alarm rules comprising a first alarm rule each of said different alarm rules establishing an alarm test for the first selected variable, and a second alarm rule establishing an alarm test for the second selected variable a corresponding one or more variables;

detecting when the alarm test for any one or more of the plurality of different alarm rules is met, including the first alarm rule and the second alarm rule;

repeatedly generating a time above threshold value, said time-above threshold value being a measure of an amount of time during which at least one of the one or more alarm tests has been met during a preselected prior window of time, wherein the measure of the amount of time during which at least one of the one or more alarm tests has been met during the preselected prior window of time includes an aggregation of two or more noncontiguous time intervals during which at least one of the one or more alarm tests has been met during a preselected prior window of time;

detecting when the time above threshold value exceeds a predefined condition window value; and

in response to detecting that one or both of the first alarm rule and/or the second alarm rule are met when the time above threshold value exceeds said condition window, generating an output to the user connoting that one or more of the plurality of different alarm rules has been met such that the output identifies the profile for the selected variables to the user without indicating which of the plurality of different alarm rules included in the profile for the selected variables has been met alarm.

14. **(Currently Amended)** The method of claim 13 further comprising persisting the output after generating an exception, maintaining that exception at least as long as either of the first alarm rule or the second alarm rule are met the time above threshold value exceeds a clear window value.

15. **(Cancel)**

16. **(Currently Amended)** A non-volatile electronic storage medium that electronically stores a computer program configured to cause stored-on-a-computer-readable-medium-for-causing a computer system to perform the functions of: monitoring a preselected variable relating to said element;

defining a threshold for the monitored preselected variable, wherein defining the threshold for the monitored preselected variable comprises:

defining a first set of threshold eras such that the threshold eras of the first set of threshold eras are periodic at an era frequency and have a common era length;

defining a plurality of metric threshold periods that occur within each threshold era of the first set of threshold eras such that the metric threshold periods do not overlap each other and occur within the threshold eras of the first set of threshold eras at predetermined times within the threshold eras, the plurality of metric threshold periods including a first metric threshold period and a second metric threshold period;

computing an average value for the preselected variable within the first metric threshold period based on values obtained for the preselected variable within the first metric threshold period during previous threshold eras in the first set of threshold eras;

computing an average value for the preselected variable within the second metric threshold period based on values obtained for the preselected variable within the second metric threshold period during previous threshold eras in the first set of threshold eras;

determining a first threshold based on the average value for the preselected variable within the first metric threshold period; and

determining a second threshold based on the average value for the preselected variable for the second metric threshold period;

establishing a sliding window in time that is shorter than the common era length;

determining if the preselected variable is currently breaching the threshold during a threshold era included in the first set of threshold eras, wherein determining if the preselected variable is currently breaching the threshold during a threshold era included in the first set of threshold eras comprises:

determining if the preselected variable is breaching the first threshold during a first metric threshold period of the current era included in the first set of threshold eras; and

determining if the preselected variable is breaching the second threshold during a second metric threshold period of the current threshold era included in the first set of threshold eras;

repeatedly generating a time above threshold value, said time above threshold value being a measure of an amount of time during which the preselected monitored variable exceeded the threshold during the sliding window of time, wherein the measure of the amount of time during which the monitored variable exceeded the threshold during the sliding window in time includes an aggregation of two or more noncontiguous time intervals during which the monitored variable exceeded the threshold during the sliding window in time;

detecting when the time above threshold value exceeds a predefined condition window value; and

in response to detecting when the time above threshold value exceeds said condition window value, generating an alarm.

17. **(Previously Presented)** A non-volatile electronic storage medium that electronically stores a computer program configured to cause a computer for monitoring an element in a computer network, said program stored on a computer-readable medium for causing a computer system to perform the functions of: presenting a user with a plurality of variables associated with one or more elements in a computer network;

receiving a selection by the user of two or more of the presented variables, the two or more selected variables comprising a first selected variable and a second selected variable;

defining a profile for the selected variables that element, said profile including a plurality of different alarm rules, the plurality of different alarm rules comprising a first alarm rule each of said different alarm rules establishing an alarm test for the first selected variable, and a second alarm rule establishing an alarm test for the second selected variable a corresponding one or more variables;



detecting when the alarm test for any one or more of the plurality of different alarm rules is met, including the first alarm rule and the second alarm rule;

~~repeatedly generating a time above threshold value, said time above threshold value being a measure of an amount of time during which at least one of the one or more alarm tests has been met during a preselected prior window of time, wherein the measure of the amount of time during which at least one of the one or more alarm tests has been met during the preselected prior window of time includes an aggregation of two or more noncontiguous time intervals during which at least one of the one or more alarm tests has been met during a preselected prior window of time;~~

~~detecting when the time above threshold value exceeds a predefined condition window value; and~~

~~in response to detecting that one or both of the first alarm rule and/or the second alarm rule are met when the time above threshold value exceeds said condition window, generating an output to the user connoting that one or more of the plurality of different alarm rules has been met such that the output identifies the profile for the selected variables to the user without indicating which of the plurality of different alarm rules included in the profile for the selected variables has been met alarm.~~

18. (Cancel)